

Claims

1. Device for heating liquids, comprising:

- a base structure, and
- at least one heating element connecting to the base structure,

5 wherein at least one non-linear channel structure is arranged between the base structure and the heating element for throughflow of a liquid for heating.

10 2. Device as claimed in claim 1, characterized in that at least a part of the channel structure is arranged recessed into an outer surface of the base structure.

15 3. Device as claimed in claim 1 or 2, characterized in that at least a part of the channel structure is arranged recessed into the heating element.

4. Device as claimed in any of the foregoing claims, characterized in that the heating element takes a substantially plate-like form.

5. Device as claimed in any of the foregoing claims, characterized in that the channel length of the channel structure lies between 0.3 and 7 metres, in particular 20 between 0.5 and 5 metres.

6. Device as claimed in any of the foregoing claims, characterized in that the cross-section of the channel structure has a surface area which lies between 1 and 100 mm², in particular between 2 and 50 mm².

25 7. Device as claimed in any of the foregoing claims, characterized in that the channel structure has an at least partly angular form.

8. Device as claimed in any of the foregoing claims, characterized in that the 30 channel structure has an at least partly curved form.

9. Device as claimed in claim 8, characterized in that the channel structure has an at least partly spiral-shaped form, wherein the channel structure is formed at least partially by at least one spirally wound strip.

10. Device as claimed in any of the foregoing claims, characterized in that at least a part of the base structure directed toward the heating element takes an at least partially flexible form, and in particular is at least partly manufactured from a flexible material.

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11. Device as claimed in any of the foregoing claims, characterized in that the device comprises bias-generating means to enable the base structure to connect under bias to the heating element.

10 12. Device as claimed in any of the foregoing claims, characterized in that the base structure is formed by a plurality of separate, mutually connected base modules.

15 13. Device as claimed in any of the foregoing claims, characterized in that the device is provided with a pump for pumping the liquid for heating under pressure through the channel structure.

14. Device as claimed in claim 13, characterized in that the pump flow rate of the pump can be regulated.

20 15. Device as claimed in claim 14, characterized in that the device is provided with sensor means coupled to the pump for regulating the pump flow rate subject to the liquid temperature in the channel structure.

25 16. Device as claimed in any of the foregoing claims, characterized in that the heating element is displaceable relative to the base structure between a position connecting to the channel structure and a position situated at a distance from the channel structure.

30 17. Device as claimed in claim 15, characterized in that the base structure and the heating element in the position at a distance from the base structure mutually enclose an evaporation chamber.

18. Device as claimed in any of the claims 13-15, and claim 16 or 17, characterized in that the pump is coupled to the heating element and/or the base structure in order to change the relative orientation of the heating element and the base structure.

5 19. Base structure for use in a device as claimed in any of the claims 1-18.

20. Method for heating liquids using a device as claimed in any of the claims 1-18, comprising the steps of:

10 a) activating the heating element, and
b) guiding a liquid for heating through a passage formed between the heating element and the base structure.

21. Method as claimed in claim 20, wherein during performing of step b) the liquid for heating is guided along the heating element via the channel structure.

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22. Method as claimed in claim 20, wherein during performing of step b) the liquid for heating is guided through the passage along the heating element with forming of a vapour.

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23. Method as claimed in any of the claims 20-22, characterized in that guiding of the liquid for heating through the passage formed between the heating element and the base structure as according to step b) takes place under increased pressure.